



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/758,712	01/11/2001	Peter David Wendt	SONY 3.0-021	9527

530 7590 03/26/2004
LERNER, DAVID, LITTENBERG,
KRUMHOLZ & MENTLIK
600 SOUTH AVENUE WEST
WESTFIELD, NJ 07090

EXAMINER

AZARIAN, SEYED H

ART UNIT	PAPER NUMBER
----------	--------------

2625

DATE MAILED: 03/26/2004

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/758,712

Applicant(s)

WENDT, PETER DAVID

Examiner

Seyed Azarian

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-22 is/are allowed.
- 6) ☒ Claim(s) 1-15 and 23-28 is/are rejected.
- 7) ☒ Claim(s) 29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 January 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3.4.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 1-3, 7-9 and 23-28, are rejected under 35 U.S.C. 102(e) as being anticipated by (Pobust Template Matching for Affine Resistant Image Watermarks).

Regarding claim 1, Shelby Pereira discloses a hidden watermark arranged in at least one of said plurality of frames, said watermark including a first preselected pattern of data and a second preselected pattern of data, said first preselected pattern including information from which the geometric configuration (page 1125, second paragraph through page 1126, the watermark extraction process is divided into two phases. First, we have the template (geometric configuration), detection phase and then we decode the watermark if the template has been detected, the template contains no information but is merely a tool used to recover possible transformation in the image and consisted of a random arrangement of peaks in FFT domain. Also template detection process involves several steps. The main idea is to exploit the fact that

Art Unit: 2625

the template points have been embedded along two lines which go through the origin as described in section II-D).

second reselected second reselected pattern of data including information indicative of a desired message, said first and second reselected patterns of data being substantially hidden (page 1124, third paragraph (encoding the message) in image watermarking we are given a message to be embedded which can be represented in binary form as number of bits in the message);

first and second preselected pattern of data being substantially hidden when said video or audio data is display (see abstract embedding digital watermark into an image).

Regarding claim 2, Shelby Pereira discloses the computer readable memory medium of claim 1, wherein said first preselected pattern of data is arranged at a central portion of said at least one frame (page 1125, section A. the main idea is to exploit the fact that template points have been embedded along two lines which go through the origin (central portion) as described in section II-D).

Regarding claim 3, Shelby Pereira discloses the computer readable memory medium of claim 1, wherein said second preselected pattern of data is arranged at portions other than said central portion of said at least one frame (page 1125, in what follows we work in the upper half plane and assume that the corresponding modifications are made in the lower half plane to).

Regarding claim 7, Shelby Pereira discloses the computer readable memory medium of claim 1, wherein said desired message of said second preselected pattern of data comprises a do not copy message (see abstract, discouraging illicit copying and distribution of copyrighted material, also page 1124, section A, encoding message).

Regarding claim 8, Shelby Pereira discloses the computer readable memory medium of claim 1, wherein said first preselected pattern of data comprises a design having portions suitable to be converted into log polar coordinates (page 1125 section D the points of the template are distributed uniformly along two lines in the DFT domain at angles 1 and 2 (polar coordinates for the template)).

Regarding claims 9, 23 and 27, it recites similar limitation as claim 1, are similarly analyzed.

Regarding claims 24-26 and 28, it recites similar limitation as claims 2, 3 and 7 are similarly analyzed.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 4-6 and 10-15, is rejected under 35 U.S.C. 103(a) as being unpatentable over Shelby Pereira et al (Robust Template Matching for Affine Resistant Image Watermarks) in view of Jean-Paul Linnartz et al (Detecting Electronic Watermarks In Digital Video).

Regarding claims 4 and 5, Shelby Pereira fails to disclose "DVD or optical medium". On the other hand Jean-Paul Linnartz in the same field of water marking teaches Digital Versatile Disc (DVD) tool for copy protection in the digital world are sought in two directions: cryptography and embedded signaling (page 1, through page 2).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify method of Shelby Pereira invention according to the teaching of Jean-Paul Linnartz because it provides greater amounts of data such as encoded audio and computer data, which can easily be implemented in an image device such as DVD or video technology.

Regarding claims 10-11 and 14 it recites similar limitation as claim 4 are similarly analyzed.

Regarding claims 6 and 12 it recites similar limitation as claims 2 and 3, are similarly analyzed.

Regarding claims 13 and 15 it recites similar limitation as claims 7 and 8, are similarly analyzed.

Allowable Subject Matter

4. Claim 29, are objected as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitation of the base claim and any intervening claims.

Allowable claims

5. The following is an examiner's statement of reasons for allowance.

The claim 16, is allowable due to comparing the actual geometric configuration of said first preselected pattern of data with reference geometric configuration information thereof stored in memory associated with a watermark detector; calculating any deviation between said actual geometric configuration of said first preselected pattern of data and said reference geometric configuration information thereof.

The closest prior art of record (Shelby Pereira) teaches template matching for affine resistant image watermarks for discouraging copying and distribution of copyrighted material. But Shelby Pereira neither teach or suggest calculating any deviation between said actual geometric configuration of said first preselected pattern of data and said reference geometric configuration information thereof.

These key features in combination with other features of the claimed invention are neither taught nor suggested by the art of record.

Thus claims 16-22 is allowable.

Other prior art cited

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. patent (6,141,441) to Cass et al is cited for decoding data from patterned color modulated image regions in a color image.

U.S. patent (6,108,434) to Cox et al is cited for counteracting geometric distortions for DCT based watermarking.

U.S. patent (4,313,984) to Moraw et al is cited for laminated identity card having separation-resistant laminae and method of manufacturing same.

U.S. patent (5,915,027) to Cox et al is cited for digital watermarking.

U.S. patent (6,282,300) to Bloom et al is cited for rotation, scale, and translation resilient public watermarking for images a log-polar Fourier.

U.S. patent (6,047,374) to Barton is cited for method and apparatus for embedding authentication information within digital data.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seyed Azarian whose telephone number is (703) 306-5907. The examiner can normally be reached on Monday through Thursday from 6:00 a.m. to 7:30 p.m.

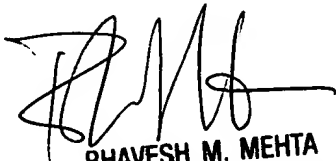
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta, can be reached at (703) 308-5246. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application information Retrieval (PAIR) system. Status information for published application may be obtained from either Private PAIR or Public PAIR.

Application/Control Number: 09/758,712
Art Unit: 2625

Page 8

Status information about the PAIR system, see [http:// pair-direct.uspto.gov](http://pair-direct.uspto.gov). Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



BHAVESH M. MEHTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

Seyed Azarian
Patent Examiner
Group Art Unit 2625
March 17, 2004